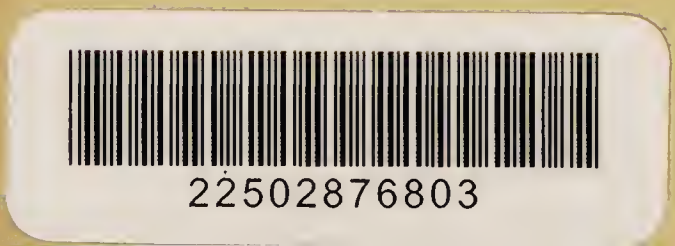
PLANTS

AND

PLANT PRODUCTS

OF

THE BIBLE.


22502876803

A SHORT ACCOUNT

OF THE

PLANTS AND PLANT PRODUCTS OF THE BIBLE,

WITH REFERENCES.

FOR USE WITH

SOUTHALLS' BIBLICAL HERBARIUM.

EDITED BY

H. B. TRISTRAM, D.D., LL.D., F.R.S., ETC.,

Canon of Durham.

AUTHOR OF "NATURAL HISTORY OF THE BIBLE"; "THE GREAT SAHARA"; "THE LAND OF ISRAEL"; "THE LAND OF MOAB," ETC., ETC., ETC.

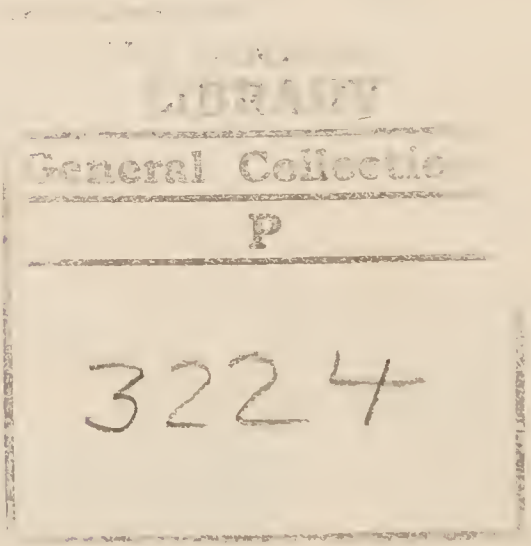
PUBLISHED BY

SOUTHALL BROS. & BARCLAY,

BIRMINGHAM.

1897.

PRINTED AT
SOUTHALL BROS. AND BARCLAY'S PRIVATE PRESS,
BIRMINGHAM.



PREFACE.

THE information contained in the following pages has been written especially for use with SOUTHALLS' BIBLICAL HERBARIUM, being drawn from treatises by the most competent authorities, CANON TRISTRAM, D.D., of Durham, having kindly edited the same.

Where the writers consulted disagree in reference to the plant or plant product intended, the fact of their disagreement has been stated and a specimen given of that preferred by the majority.

For the convenience of those examining the Herbarium, the substance of the passage in which the plant finds mention has been given as well as the reference. In most cases all the references to each specimen are given, those omitted being either of little interest, or too numerous for insertion. For the sake of brevity Hebrew and Greek names have been generally omitted, but in all cases the correct botanical designation has been given.

The notes referring to each specimen have been compiled, and the collection has been designed and arranged by Mr. WILFRED F. SOUTHALL. It is as complete as possible, and contains over seventy specimens. A few have proved to be unobtainable, and it has been deemed unnecessary to provide examples of such well-known plants as the melon, vine, cucumber, etc.

Digitized by the Internet Archive
in 2018 with funding from
Wellcome Library

https://archive.org/details/b30480255

THE

PLANTS AND PLANT PRODUCTS OF THE BIBLE.

THE NUMBERS REFER TO THE SPECIMENS IN SOUTHALLS' BIBLICAL HERBARIUM.

1. ALMOND.—The common almond tree, *Amygdalus communis*, which has been cultivated for ages in Syria and Palestine, and also grows wild. Blossoms before the leaves appear; hence the Hebrew name, "Shâked," to hasten or watch. There is a play on the meaning of the word in Jeremiah i., 11-12. In answer to God's question, the prophet says:—"I see the rod of an almond tree" (Shâked); and the Lord said, "Thou hast well seen: for I watch (Shoked) over my word to perform it." The fruit is first mentioned when Jacob sent almonds as a part of his gift to Joseph (Genesis xliii., 11). The bowls of the Golden Candlestick were designed from the almond blossom (Exodus xxxvii., 17-21). Aaron's rod that budded was a branch of an almond tree (Numbers xvii., 8). The figurative description of the "old man" (Ecclesiastes xii., 5) takes one of its metaphors from the almond tree.

2. **ALGUM, or ALMUG.** — Most probably Red Sandalwood, *Pterocarpus Santalinus*. Not indigenous to Palestine, but imported from Ophir by Solomon for the pillars and rails of the temple in Jerusalem, and for musical instruments (I. Kings, x., 11-12. II. Chronicles, ii., 8, and ix., 10-11).

3. **ALOES.**—Probably the odoriferous resin obtained from the Eagle Tree of Cochin China, *Aquilaria Agallocha*, the wood being known as aloes wood, eaglewood, lignum aloes, etc. This has long been a most grateful perfume to Oriental nations. Used as a perfume for garments (Psalms xlv., 8; Song of Solomon iv., 14); also as a spice for preparing the body of our Lord for burial (John xix., 39). In Numbers xxiv., 6, Balaam, in blessing Israel, compares the condition of the Israelites to the "lign-aloes which the Lord hath planted." This tree has no connection with the bitter aloes of medicine, which one writer suggests was the aloes used for embalming, but which is an American plant.

4. **ANISE.**—Incorrectly translated in Matthew xxiii., 23, where it should be Dill, *Anethum graveolens*. Cultivated in the East, and used both as a medicine and a condiment. According to the Talmud, its "seeds, leaves, and stem" were subject to tithe.

4a. **APPLE.**—The Hebrew word "tappach" translated "apple" may stand for any fruit which is strongly scented, as is implied by the derivation of the word. The apple does not grow in Palestine, and it is thought that the "apricot," universal throughout the country, is probably the tree intended. It grows to a height of 30ft., has a rounded mass of glossy leaves, and bears an orange-coloured fruit that gives out a delicious perfume. "A word fitly spoken is like apples of gold in baskets (margin, filigree work) of silver" (Prov. xxv., 11.; also Song of Solomon ii., 5; vii., 8).

5. **BALM, or BALSAM.**—The highly esteemed aromatic resin which flows from the stem of the *Amyris Gileadensis*, a small tree, native of Arabia and Abyssinia, but cultivated in Judæa from a very early date, though not now growing in Palestine. From Jericho, Cleopatra obtained plants for her gardens at Heliopolis, over which an imperial guard was placed. Balm formed part of the merchandise brought by the Ishmaelites from Gilead when they bought Joseph from his brethren at Dothan (Genesis xxxvii. 25). In the R.V. the marginal reading is "mastic," the product of a tree, *Pistachia lentiscus*, indigenous to Palestine, and a commercial commodity from the earliest times. It is valuable as a varnish, but is not generally

considered to be the correct translation. A "little balm" was sent as a present by Jacob when he reluctantly allowed Benjamin to go into Egypt with his brethren (Genesis xliii., 11). An article of commerce between the Jews and Tyrians (Ezek. xxvii., 17). The medicinal value of balm is referred to by Jeremiah three times, when he says, "Is there no balm in Gilead? is there no physician there?" (Jer. viii., 22); also, "Go up into Gilead, and take balm, O virgin daughter of Egypt: in vain dost thou use many medicines; there is no healing for thee" (Jer. xlvi., 11; *see* also li., 8)

6. **BARLEY.**—*Hordeum distichon* and other varieties have been cultivated in Palestine from the earliest times, and, being inferior to wheat, probably formed the food of the poorer classes, as well as that of the horses and asses. The friends of David brought barley for his young men during the rebellion of Absalom (II. Samuel, xvii., 28). It was in the similitude of a cake of barley bread falling into the camp that the destruction of the Midianitish army by Gideon was foretold in a dream to one of the invaders (Judges vii., 13). The plague of hail damaged the barley which was in the ear (Exodus ix., 31). For the value of barley as a sacrifice, see Leviticus xxvii., 16. Used in the law concerning jealousy (Numbers v., 15; see also

Hosea iii., 2). The Land of Promise was a land of wheat and barley (Deuteronomy viii., 8). Ruth was permitted to glean unto the end of barley harvest (Ruth ii., 23). Solomon supplied twenty thousand measures of barley as part of the provisions for the workmen of Hiram, who were cutting timber in the Lebanon forest for the temple (II. Chronicles, ii., 10). Solomon fed his great stud of chariot horses with barley (I. Kings, iv., 28). Christ performed the miracle of feeding the multitude with five barley loaves and two fishes (John vi., 9).

7. BEAN.—The common bean, *Faba vulgaris*, and other varieties, are much cultivated in Palestine, and were used both as a vegetable and flour by the Jews (II. Samuel xvii., 28; Ezekiel iv., 9). Possibly the "pulse" given to Daniel and his companions was prepared from the bean (Daniel i., 12).

8. BOX.—The Box tree, *Buxus longifolia*, is indigenous to Lebanon; it resembles that known in England, but is a larger variety. The wood is prized in Syria for making combs, spoons, etc. Twice mentioned in Isaiah, xli., 19, and lx., 13). In Ezekiel xxvii., 6, the correct reading, according to the R.V., is "benches of ivory inlaid in boxwood."

9. BRAMBLE (rendered Briers). — The common bramble or blackberry, *Rubus fructicosus*, is probably intended. The scourge threatened by Gideon to the men of Succoth (Judges viii., 7 and 16).

10. BRIERS.—Butchers' broom, *Ruscus aculeatus*, is intended where the Hebrew word "sillon" is translated "briers." The prophet points to the restoration of Israel, when "there shall be no more a 'pricking brier unto the house of Israel" (Ezekiel xxviii., 24). Another allusion to briers occurs in Ezekiel, ii. 6.

11. THISTLE.—The Star Thistle, *Centaurea calcitrapa*, is found in cornfields all over South Europe, and also in desert places. It is the most common "prickly plant" of Palestine, great spines proceeding from the involucre of the flower. The flower was at one time called "caltraps," from *calx*, Latin for "heel," and *trappa*, "a snare." The caltrop was an iron ball with four spikes, which, when resting upon three, caused the fourth to be erect. It was used for impeding cavalry, and closely resembles the spiny head of the *Centaurea calcitrapa*. Thistles form part of the punishment of mankind as recorded in Genesis iii., 18., also Hosea x., 8. Referred to in the Sermon on the Mount, "Do men gather . . . figs of thistles" (Matthew vii., 16). Also referred to in Hebrews vi., 8.

12. THORN. — Either the Christ thorn, *Paliurus aculeatus*, or the jujube tree, *Zizyphus spina-christi*. Both grow freely in the Jordan valley and about Jerusalem, and from one or the other the Crown of Thorns is supposed to have been plaited (Matthew xxvii., 29). See also reference to "crackling of thorns under a pot" (Eccles. vii., 6).

NOTE.—From eighteen to twenty-two Hebrew words are used in the Bible to express prickly shrubs or weeds, which are indifferently translated as bramble, brier, thorn, thistle, and there is little to guide in distinguishing or identifying them. Their presence in Syria and Palestine is due to the fact of there being so much desert land.

13. BULRUSH.—The marginal reading of the R.V. is Papyrus, the *Papyrus antiquorum*. The famous papyrus of Egypt grew at one time like a forest on the banks of the Nile. It is now extinct in Egypt, but is found in Nubia, near Gennesaret, and in Sicily. Papyrus was used by the mother of Moses to make the ark in which she placed her infant on the Nile (Exodus ii., 3); also used for making "swift vessels" to carry ambassadors to the scattered nations (Isaiah xviii., 2). The modern Abyssinians still make vessels of it. Grew in marshy and muddy soil (Job viii., 11). Thought to be the "lotus" of the R.V. (Job xl., 21, 22). Papyrus was used for making paper till the 7th century; the bark was stripped off the triangular stem, and the pithy and fibrous interior peeled for a certain

length, the thin strips thus obtained being pasted across each other and pressed. The stems grow from 10ft. to 15ft. high, with a diameter at the bottom of 3 inches. The word "paper" came from the Arabic name of the plant, "babeer." It was also used for making sandals, baskets, bottoms of chairs, etc.

14. CALAMUS.—The Sweet Flag, *Acorus calamus*, has a fragrant underground stem, which was used as an ingredient in the Holy Anointing Oil (Exodus xxx., 23). Sold in the market of Tyre (Ezekiel xxvii., 19). The "sweet cane" of Isaiah xliii., 24, and Jeremiah vi., 20, has in R.V. marginal reading "Calamus," but is thought by some to mean the sugar cane.

15. CAMPHIRE.—The Henna Plant, *Lawsonia alba*, which bears clusters of very fragrant white and yellow flowers. The bruised leaves have been used from the remotest antiquity as a cosmetic, to give a reddish orange stain to the nails, etc. In the Song of Songs i., 14., R.V., henna flowers are spoken of in connection with the vineyards of En-gedi, near the Dead Sea, the only spot in Palestine where the plant still grows. The hands of mummies are found stained with henna, just as is done by the Egyptian women in Cairo to-day.

16. DESIRE.—R.V. Caper-berry. The unexpanded flower buds of various species of *Capparis*. Abundant in Palestine, and largely used as a stimulating condiment, preserved in vinegar. In Ecclesiastes xii., 5, R.V., used as an emblem of the dissolution of an old man. "The caper-berry shall fail" (*Heb.* : "Make itself of no avail") *i.e.*, shall no longer in old age act as a stimulant. "Fail," in the R.V., has a marginal reading "burst," probably referring to the bud bursting into flower, when it would no longer be of any use.

17. CASSIA.—The bark of the spice-bearing tree, *Cinnamomum cassia*. An ingredient in the Holy Anointing Oil (Exodus xxx., 24). Imported into Tyre by Greek merchants (Ezekiel xxvii., 19) ; also mentioned as a perfume (Psalms xlv., 8). The R.V. margin (Exodus xxx., 24) suggests "Costus," the aromatic root of a plant found in Cashmere.

18. CEDAR.—The Cedar of Lebanon, *Cedrus Libani*, was the glory of the vegetable kingdom in Palestine, and is used throughout Scripture as the symbol of grandeur, might, loftiness, etc. A wide-spreading tree (Ezekiel xxxi., 3), and tall (Isaiah ii., 13). Solomon sends his men to Lebanon for cedars (I. Kings, v., 6, 14 ; II. Chronicles, ii , 8, 16). Cedar trees were brought from Lebanon to Joppa

by the men of Tyre and Sidon for the second temple (Ezra iii., 7). The righteous "shall grow like a cedar in Lebanon" (Psalms xcii., 12). The "cedar wood" was used for purification (Leviticus xiv., 4). Jeremiah speaks of chambers ceiled with cedar, and painted with vermilion (Jer. xxii., 14). The "little cedar," or juniper, from which source we obtain the fragrant "cedar wood" of our pencils, is an American tree. The British Museum contains portions of genuine Lebanon cedar beams from Nineveh in remarkably perfect condition.

19. CINNAMON.—The aromatic inner bark of *Cinnamomum zeylanicum*, a native of Ceylon, and unknown in Syria. One of the ingredients of the Holy Anointing Oil (Exodus xxx., 23). Used as a perfume (Prov. vii., 17), and as a symbol for sweetness (Song of Solomon iv., 14).

20. CORIANDER.—The fruit of *Coriandrum sativum*, which was cultivated in Egypt to give a flavour to bread. Mentioned only in connection with its similarity to "manna" (Exodus xvi., 31; Numbers xi., 7).

21. COTTON.—The product of the cotton plant, *Gossypium herbaceum*. In the R.V. margin "cotton" replaces the hangings of "green" of the A.V. in Esther i., 6, the only place where the Hebrew word is found. The cotton plant is now largely cultivated in Palestine, and furnishes almost the entire clothing of the women.

21a. **CUCUMBER.**—The fruit of the cucumber plant, *Cucumis chate*, has long been one of the principal vegetables of Egypt, and is a staple article of diet for the poor in Palestine in summer. The fruit was mourned for in the wilderness by the Israelites (Numbers xi., 5). A lodge in a garden of cucumbers, as referred to in Isaiah i., 8, erected to protect them from the jackals, etc., may still be seen in many parts of Palestine.

22. **CUMMIN.**—The aromatic fruit of *Cuminum cyminum*. Cultivated in Palestine, and used as a spice and a medicine. The fruits were separated from the plants by being beaten with a rod (Isaiah xxviii., 25-27). Reference is make to tithing the cummin (Matthew xxiii., 23).

23. **CYPRESS.**—*Cupressus sempervirens*, a common tree in the uplands of Palestine, being much planted in cemeteries. It grew on Lebanon, providing a hard wood good for shipbuilding, and is thought to be the "gopher wood" of which the ark was made (Genesis vi., 14). One of the trees out of which idols were carved (Isaiah xliv., 14) The R.V. here translates the word "Holm-tree" (*Quercus ilex*).

24. **EBONY.**—The heart-wood derived from the date-plum tree, *Diospyros ebenum*, of Ceylon and Africa. The Hebrew word "habnim" signifies the "billet" into which the wood was cut previously to exportation. Imported into Tyre with ivory by the men of Dedan (Ezekiel xxvii., 15).

25. FIG.—The fig tree, *Ficus Carica*, is everywhere common in Palestine, both wild and cultivated. The fruit was, and is still, much used for food. The figs appear in February before the leaves, which do not cover the tree until a month or six weeks later, and when the leaves are fully out the fruit should be ripe (Matthew xxi., 19). The spies brought figs with grapes from Eshcol to prove the goodness of the promised land (Numbers xiii., 23). Jeremiah, under the type of good and bad figs, foreshowed the return from captivity (Jeremiah xxiv). Abigail brought two hundred cakes of figs to David (I. Samuel xxv., 18). A cake of figs was applied to Hezekiah's boil (II. Kings, xx., 7; Isaiah xxxviii,, 21).

(*See* Concordance for many other references).

26. FIR.—The Hebrew word "berosh" is a generic name for several cone-bearing trees in Palestine, among which are the Aleppo pine, *Pinus halepensis*, also the Stone pine, *Pinus pinea*, etc. The R.V. margin gives "cypress," but the Biblical allusions suit a fir better. The fir is often mentioned in connection with the cedar as a tree of fine growth (II. Kings, xix., 23; Isaiah xxxvii., 24). Supplied timber for floors, ceilings, and doors (I. Kings, vi., 15, 34, and II. Chronicles iii., 5) for the manufacture of musical instruments, especially harps (II. Samuel, vi., 5). Frequently

referred to with symbolic meaning, as, "Instead of the thorn shall come up the fir tree" (Isaiah lv., 13. Further allusions in Isaiah xli., 19, and Zech. xi., 1-2).

27. FITCHES.—R.V. margin, black cummin. The seeds of the *Nigella sativa* of the buttercup order, having no connection with "fitch," which was an old name for "vetch." The seed occurs in a capsule, and the plant is too small to bear the threshing instrument, and must therefore be "beaten out" with a staff to liberate it (Isaiah xxviii., 25-27). Used for flavouring dishes and for spreading on cakes and bread, for which purpose it is still used in Palestine.

28. FLAX.—An annual plant, *Linum usitatissimum*. The earliest material known to have been cultivated and manufactured for clothing purposes. Mummy cloth was invariably made of flax. It suffered during the plague of Egypt, the flax being said to be "bolled," signifying "in bloom" (Exodus ix., 31). Pharaoh arrayed Joseph in fine linen (Genesis xli., 42). Linen was used for the curtains and hangings of the tabernacle (Exodus xxvi., 31, 36), and for the garments of the priests (Leviticus vi., 10; Exodus xxxix., 27). Rahab hid the spies among the stalks of flax (Joshua ii., 6). In praising the qualities of a good wife,

Solomon says, "She seeketh wool and flax, and worketh willingly with her hands" (Proverbs xxxi., 13). The use of tow for the wicks of oil lamps is referred to in the prophetic words referring to our Lord's character. "The smoking flax shall he not quench" (Isaiah xlii., 3). The body of our Lord was wrapped in "linen cloths" (John xix., 40; John xx., 5-7). White linen robes are taken as representing the righteousness of saints (Revelation xix., 8). "Tow" is mentioned as weak and worthless for cordage (Judges xvi., 9). The process of combing the flax is alluded to in Isaiah xix., 9.

29. FRANKINCENSE. — The resin known as Olibanum, obtained from the stems of several species of *Boswellia* by cutting slits in the bark. Imported from Arabia (Isaiah lx., 6, R.V.; Jeremiah vi., 20, R.V.), One of the ingredients of the sacred incense, which was used primarily for subduing the odour from the sacrifices (Exod. xxx., 34-36). The "wise men" brought frankincense to the infant Jesus (Matthew ii., 11).

30. GALBANUM.—The gum resin obtained from the root of the umbelliferous plant, *Ferula galbaniflua*. An ingredient of the sacred incense (Exodus xxx., 34). Used in the embalming mixture known as "metapion" in Egypt.

31. GALL. — The Hebrew word "rosh" signifies a "head," and is supposed to be the poppy, *Papaver setigerum*, a cornfield weed in South Europe. Hosea says in reproving Israel, "Judgment springeth up as hemlock in the furrows of the field"; a marginal note states that this should read "rosh" or "gall" (Hosea x., 4). Our Saviour was given wine to drink mingled with gall (Matthew xxvii., 34). It is said to have been an ordinary custom, especially among Jewish ladies, to give dying persons some intoxicating potion to make them less sensitive to pain. In many instances it is used metaphorically to express bitterness, affliction, etc., etc. (Deuteronomy xxix., 18 and xxxii., 32; Psalm lxix., 21; Jeremiah viii., 14.

32. GARLICK.—A kind of onion, *Allium sativum*. The Hebrew word means to have a smell. Wild and cultivated in Palestine and Egypt. One of the "good things" remembered by the Israelites when in Egypt (Numbers xi., 5).

33. GOURD, Wild Vine.—Doubtless the colocynth or bitter apple, *Citrullus colocynthis*, growing in profusion about Gilgal. The squirting cucumber, *Ecbalium elaterium*, has also been suggested as the fruit referred to, but it is not so bitter, nor does it bear the same resemblance to the

good fruit. The pottage into which the poisonous fruit of a "wild vine" was shred by a young prophet in mistake for a melon, was made harmless by Elisha (II. Kings, iv., 38-41). Probably the plant referred to as the vine of Sodom (Deuteronomy xxxii., 32. The "knops" carved in cedar wood, which ornamented Solomon's temple, were cut in the shape of a gourd (see marginal note, I. Kings, vi., 18).

33a. GROVE.—R.V. Tamarisk tree. The Hebrew word "eshel" clearly denotes a "tree," and the tamarisk is probably that intended. It grows in dense clusters on the Lower Jordan. Abraham planted a tamarisk tree in Beer-sheba (Genesis xxi., 33, R.V.; also I Samuel xxii., 6, R.V.; xxxi., 13, R.V.).

34. JONAH'S GOURD.—The Hebrew word has no connection with that rendered "wild gourd" elsewhere. The common gourd, *Laginaria vulgaris*, is most rapid in its growth, and is commonly used in the East for covering trellis and arbours. It meets all the conditions of the problem, withering as rapidly as it shoots. From a similarity in the Hebrew names the castor oil plant, *Ricinus communis* (most unsuited to the circumstances), has been erroneously identified with this gourd. The derivation of the Hebrew word "kikayon" is the Egyptian word, "kike," which is the name given to the oil extracted from the seed of the above plant (Jonah iv., 6-10).

35. **HEATH.**—R.V. margin, Tamarisk. The Savin, or dwarf juniper, *Juniperus sabina*, the Arabic name of which is identical with the Hebrew. It is a stunted shrub bearing purple berries, and grows in the most barren and rocky parts of the desert. In Jeremiah xvii.. 6, this tree is the emblem of the man "whose heart departeth from the Lord." Jeremiah xlviii., 6, marginal reading in the A.V., "naked tree"

36. **HUSKS.**—R.V. margin, "the pods of the Carob tree," *Ceratonia siliqua*. Known also as the locust bean and St. John's bread, the latter from the [erroneous] notion that they were the locusts on which the Baptist fed. The tree is very common in Palestine, and the pods are found in enormous quantities in April and May, and are to be seen on the stalls in all Oriental towns; much used for feeding animals, containing about 63 per cent. of sugar. The food which the swine did eat in the parable of the Prodigal Son (Luke xv., 16).

37. **HYSSOP.**—Very many suggestions have been made as to the identity of this plant. A well-known authority considers it to be without doubt the caper plant, *Capparis spinosa*, which is found growing plentifully on rocks or ruins, or trailing on the ground. Other writers see no reason to doubt that the Origanum, the traditional hyssop,

was the plant used by the Jews. It was commonly used in purification, tied in a bunch as a sprinkler. Used at the first passover, when the lintel and two side-posts were sprinkled with the blood of the Paschal lamb (Exodus xii., 22). Used in the purification of lepers (Leviticus xiv., 4). David says, "Purge me with hyssop, and I shall be clean:" (Psalm li., 7). In John xix., 29, we find when the Lord said "I thirst," a sponge was filled with vinegar, and put upon "hyssop," which was tied to a reed and handed to Him.

38. **JUNIPER.**—R.V. margin, "Broom." A large variety of an almost leafless broom, *Retama rætam*, growing in the desert to a height of twelve feet or more. It still affords shelter to travellers in the wilderness, and under it Elijah lay down to die (I. Kings, xix., 4). Its roots are still used as charcoal (Psalms cxx., 4). Job refers to the outcasts of Edom cutting the roots for food (Job xxx., 4), or R.V. margin, for warmth.

38a. **LADANUM.**—Given in the margin of the R.V. for "myrrh" in the text of Gen. xxxvii., 25, though the same word is left without note in Gen. xliii., 11. It is the fragrant gum resin obtained from *Cistus creticus*, called ladanum or labdanum, and was formerly collected from the beards of goats, which were fond of browsing on it. It is still used in Turkey as a perfume. Formed part of the

merchandise of the Ishmaelites who went from Gilead to Egypt (Gen. xxxvii., 25), and part of the present which Israel sent by his sons to Joseph (Gen. xliii., 11).

39. LEEKS.—The word translated Leek, *Allium porrum*, means strictly a green herb. It is included with onions and garlic as among the good things of Egypt for which the Israelites lusted in the wilderness (Numbers xi., 5).

40. LENTILS.—The seeds of a small vetch-like plant, *Ervum lens*, still largely cultivated in the East, Jacob gave Esau pottage made of red lentils (Genesis xxv., 34). The Philistines were gathered together into a troop for foraging where was a plot of ground full of lentils (II. Samuel xxiii., 11) ; for other reference see Ezek. iv., 9.

41. LILY.—Much difference of opinion exists as to the lily of Scripture. Only one species of what we term "lily" is found in Palestine, *Lilium Chalcedonicum*, and that very rare and only in the north. There can scarcely be a doubt but that the Hebrew word "shûshân" (which gave the name to Shushan, the capital of Persia, as well as to the female name, Susannah) was a general term for the anemone, ranunculus and adonis, which are exactly of the same colour and shape, and succeed each other in close succession in

spring through the whole country, which is then one sheet of scarlet from their blossom. They paint the country red, as the buttercup paints our hayfields yellow. The people do not distinguish these flowers from each other. There were imitations of lily flowers upon the tops of the pillars of the House of the Lord (I. Kings, vii., 19). As an emblem of beauty, see Song of Solomon, ii., 1, 16. Christ said, "consider the lilies of the field, how they grow;" (Matthew vi., 28-29).

41a. MALLOW.—R.V. Salt wort. The Hebrew name points to some plant of salt taste; the sea purslane *Atriplex halimus* is probably intended. Mentioned in Job xxx., 4, as an article of food used by the very poor.

42. MANDRAKE.—R.V. margin, "love apples." A plant of the potato family, *Mandragora officinalis*, with a yellow pulpy fruit the size of a plum. Thought by the ancients to stimulate fruitfulness. Reuben went in the days of wheat harvest and found mandrakes in the field (Genesis xxx., 14). Alluded to as possessing fragrance in Song of Solomon vii., 13. Many strange superstitions have been attached to this plant, especially to the root, which, somewhat manipulated, may be made to look like the human figure.

43. **MANNA.**—Hebrew *man-hu*, meaning "what is it?" Manna was the name by which the miraculous food of Israel was known, which was described as "a small round thing," like coriander (*see* Exodus xvi., 15-31). The "manna" of to-day is a dried sugary juice exuding from the flowering ash tree (*Fraxinus ornus*).

43a. **MELONS.**—The water melon, *Curcubita citrullus*, is very largely cultivated in Palestine and Egypt, and forms no inconsiderable item in the food of the poor. Mentioned among the good things of Egypt (Numbers xi., 5).

44. **MILLET.**—The small seeds of at least two species of millet were cultivated in the East, *Panicum miliaceum* and *Sorghum vulgare*. It formed with other cereals an ingredient in the bread which Ezekiel was ordered to make (Ezekiel iv., 9).

45. **MINT.**—Two varieties of mint are found in Palestine, both wild and cultivated, *Mentha sativa* and *Mentha Sylvestris*. It is commonly eaten by Jews with their meat, and was one of the "bitter herbs" of the Paschal feast. Carefully tithed by the Pharisees (Matthew xxiii., 23; Luke xi., 42).

46. MUSTARD.—The seed of the black mustard, *Brassica Nigra*, growing in Palestine to a height of ten feet or more. Mentioned in the New Testament in reference to the smallness of its seed as compared with the size of its branches (Matthew xiii., 31-32; xvii., 20).

47. MYRRH.—The resinous exudation from the stem of a small tree, the *Balsamodendron myrrha*, a native of Arabia. An ingredient in the Holy Anointing Oil (Exodus xxx., 23), used as a domestic perfume (Psalms xlv., 8; Song of Solomon iii., 6), also for the purification of women (Esther ii., 12). Ishmaelites carried myrrh from Gilead in Judea, down to Egypt (Genesis xxxvii., 25). Myrrh was mixed with aloes to form a spice for embalming the dead at burial (John xix., 39). It was among the gifts of the wise men of the East to the infant Saviour (Matt. ii., 11).

48. MYRTLE.—A small tree, the *Myrtus communis*, a native of Palestine, which has always been a favourite tree wherever found. Used at the Feast of Tabernacles for making booths (Nehemiah viii., 15), and is still so used by modern Jews. In the prosperity in store for Israel, the myrtle is to grow instead of the brier (Isaiah lv., 13; xli., 19). Esther's name while she lived with Mordecai was "Hadassah," the Hebrew of myrtle.

49. NETTLES, or FIELD WEEDS.—The Roman nettle, *Urtica pilulifera*, is the most abundant variety in Palestine. In Proverbs xxiv., 30, 31, we read of the field of the slothful all overgrown with nettles. Nettles grow in old ruins (Isaiah xxxiv., 13; Hosea ix., 6). "Instead of the thorn (meaning the Hebrew "sirpad" nettle) shall come up the fir tree" (Isaiah lv., 13). (*See* also Job xxx., 7, and Zephaniah ii., 9).

50. NUTS. — The pistachio nut, *Pistacia vera*, is intended where nuts formed part of Israel's present to Joseph (Genesis xliii., 11). They were probably unknown in Egypt, as is the case at the present day, but Syria and Palestine have long been famous for the tree. The kernels are used in confectionery at the present day. The walnut, *Juglans regia*, is probably the right rendering of the Hebrew word "egôz"; Song of Solomon, vi., 11, should therefore read, "I went down into a garden of walnuts."

51. OAK.—Several varieties of the oak are known in Palestine—the Gall oak, *Quercus infectoria*, the Valonia oak, *Quercus ægilops*, etc. The latter produces enormous cups, used in tanning, and it is probable that the oaks of Bashan were of this species (Ezekiel xxvii., 6; Isaiah ii., 13; Zechariah xi., 2). The famous Abraham's oak at

Mamre, twenty-three feet in girth, till lately a vigorous tree, was supposed to occupy the site of Abraham's meeting with the angels. Several individual oaks are mentioned. The Oak of Weeping under which Deborah, Rebekah's nurse, was buried at Bethel (Gen. xxxv., 8) ; Gideon's Oak of Ophrah (Judges vi., 11) ; the Oak of Tabor, incorrectly translated "plain" in the A.V. (I. Samuel, x., 3). Great and remarkable oaks were favourite resorts for the performance of idolatrous rites (Hosea iv., 13). The strength of the oak was proverbial among the Hebrews as among ourselves (Amos ii., 9).

52. OLIVE.—The olive tree, *Olea Europea*, has long been extensively cultivated in Palestine, the fruit being one of the first necessities of life in the East. In Palestine the Turks tax each olive tree annually, old or young, and thus effectually discourage the planting of new olive yards. The yield of oil is from 10 to 15 gallons per tree. First mentioned when the dove returned to the ark with an olive leaf in her mouth (Genesis viii,, 11) ; it has been a symbol of peace and prosperity ever since (Psalm lii., 8 ; cxxviii., 3). Olive wood was used to make the two golden cherubim on the ark of the Covenant (I. Kings, vi., 23), the door of the oracle (verse 31), and the door-posts of the temple (verse 33). The oil was used in the lamp of the temple (Exodus xxv., 6 ;

also xxvii., 20), and for the manufacture of the anointing oil (Exodus xxx., 24), etc. Habakkuk says: "Although . . . the labour of the olive shall fail yet I will rejoice in the Lord" (Hab. iii., 17-18). Used as a medicine (Luke x., 34), and also to dress the hair (Psalm xxiii., 5; Matthew vi., 17). Mixed with offerings in sacrifice (Leviticus ii., 1), and used for the anointing of priests, kings, and prophets. The wild olive yields but a small and inferior fruit; it is often used as a stock on which to engraft the better kind (Romans xi., 17).

(*See* Concordance for many other references).

52a. **OIL TREE.**—The Hebrew word occurs three times; in Nehemiah viii., 15, A.V., it is translated "pine branches," R.V. "wild olive"; in I. Kings, vi., 23, "olive tree"; and in Isaiah xli., 19, "oil tree," R.V. margin, "oleaster." The oleaster, *Eleagnus angustifolius*, appears to be the tree intended, from the small green fruit of which an inferior oil is obtained.

53. **ONIONS.**—The onion, *Allium cepa*, was one of the products of Egypt after which the Jews lusted in the wilderness (Numbers xi., 5). They are much used in the raw state by Orientals when on a journey, being considered an excellent preservative against thirst. The priests we forbidden to eat them.

54. PALM.—The date palm, *Phœnix dactylifera*, for which Syria and Palestine were once famous. The Hebrew word for palm, "Tamar," was a favourite woman's name (Genesis xxxviii., 6; II. Samuel, xiii,, 1). Palm trees frequently mark the site of an oasis in the desert, as at Elim, where there were seventy trees by twelve springs of water (Exodus xv., 27). Jericho was known as the city of palm trees (Deuteronomy xxxiv., 3), but now they are entirely extinct. David says: "The righteous shall flourish like the palm tree . . . they that are planted in the house of the Lord shall flourish in the courts of our God. They shall still bring forth fruit in old age" (Psalm xcii., 12-14). The palm is commonly found in the courts of temples and mosques. Solomon carved all the walls of the "Holy of Holies" round about with palm trees (I. Kings, vi., 29). Palm branches were used in the celebrations connected with the ingathering of fruits (Leviticus xxiii., 39-40), which celebrations were revived in the time of Ezra (Nehemiah viii., 15). Palm leaves have often been taken as emblems of victory, as in the triumphal entry into Jerusalem (John xii., 12-13; also Revelations vii., 9).

55. PLANE.—The Oriental plane tree, *Platanus orientalis*. The R.V. has substituted the "plane" in place of "chestnut tree" and "pine tree" in the A.V. Mentioned

in connection with Jacob's stratagem with the peeled rods (Genesis xxx., 37); also by the prophets Ezekiel (xxxi., 8) and Isaiah (xli., 19), marginal note, R.V. The Hebrew word signifies to be "tall" and "naked," the latter in reference to the peculiar habit which plane trees have of annually shedding their bark.

56. POMEGRANATES.—The fruit of the *Punica granatum*, found both wild and cultivated in Palestine. The Hebrew word "Rimmon" is often given as a name to a town. One of the pleasant fruits of Egypt, and of the promised blessings of Palestine (Deuteronomy viii., 8; Numbers xx., 5). Pomegranate wine is referred to in the Song of Solomon, viii., 2. The fruits were figured as ornaments in blue and purple and scarlet on the priests' robes (Exodus xxviii., 31-33). They were also adopted as ornaments to the "chapiters" of the pillars of Solomon's temple (I. Kings, vii., 42).

57. POPLAR.—The white poplar tree, *Populus alba*. First mentioned in the story of the peeled rods of Jacob (Genesis xxx., 37); also mentioned by Hosea, iv., 13. Probably the tree intended where the word used is "ash." Translated in the R.V. as "fir," marginal note, "ash" (Isaiah xliv., 14), also "mulberry" (II. Samuel, v., 22-24), and "pear trees," A.V. (I. Chronicles, xiv., 14); rendered "mulberry," R.V., with marginal note, "balsam tree."

58. **REED.**—The reed of Egypt and Palestine, is the *Arundo donax*, a tall cane growing twelve feet high The large stems were used for flutes and pipes, and also for making baskets (Luke ix., 17), the small stems for making pens (Psalms xlv., 1). It was tall enough to conceal the hippopotamus (Job xl., 21). The soldiers smote our Saviour's head with a reed (Mark xv., 19; *see* also verse 36). The Hebrew word "kaneh." a measuring rod, is the source of our word "cane" (*see* Ezekiel xl., 3, and Revelation xi., 1). Reference is made to a reed "shaken in the water" (I. Kings, xiv., 15), and "shaken by the wind" (Matthew xi., 7), and to a "bruised reed" (Isaiah xlii., 3; Isaiah xxxvi., 6).

59. **RYE.**—In the R.V. translated "Spelt," *Triticum spelta*, an inferior kind of wheat. Rye is a northern plant, and not known in hot countries. The spelt was not damaged in the plague of hail (Exodus ix., 32). *See* Isaiah xxviii., 25.

60. **ROSE.**—R.V. margin, "autumn crocus." The root of the Hebrew word suggests either an "acrid" or else "bright" plant, and hence the revisors suggest the autumn crocus, *Colchicum autumnale*. The Cistus, of which many species, red, white, and yellow, abound in Palestine, is more probable. They are quite the feature of the hill country in spring. The "rose of Sharon" was probably the

Narcissus tazetta. Roses proper abound only on the Lebanon. Only mentioned twice in the Bible, the "rose of Sharon" (Song of Solomon ii., 1), and "the desert shall rejoice, and blossom as the rose" (Isaiah xxxv., 1).

61. RUE.—The garden herb, *Ruta graveolens*. Christ rebuked the Pharisees for tithing trifling objects like rue, while neglecting the weighty matters of the law (Luke xi., 42). The law did not specify this, and the other herbs mentioned with it, as plants to be tithed (Deuteronomy xiv., 22-23).

62. SAFFRON.—The bright orange yellow stigmas of the purple-flowered crocus, *Crocus sativus*, a common plant in Palestine. Mentioned only in Song of Solomon iv., 14, as one of the perfume plants of the garden.

63. SHITTAH TREE.—Shittim wood, R.V. Acacia. A thorny acacia, *Acacia seyal*, one of the sources of our gum arabic. The wood is very hard and close-grained. The tree is only mentioned in Isaiah xli., 19. The wood was used in the construction and fittings of the Tabernacle (Exodus xxv., 10, 13, 23; xxvi. 15, 26, 32, etc.). The "burning bush" of Moses (Exodus iii., 2) was no doubt an acacia. It is still abundant on the Plain of Shittim.

64. SPICERY.—Believed to have been Tragacanth, a gummy exudation obtained from several species of *Astragalus* or milk vetch. It was carried by the Ishmaelites to Egypt (Genesis xxxvii , 25).

65. SPIKENARD.—The root of a plant of the Valerian order, *Nardostachys Jatamansi*, a native of Nepal and Bhootan. Highly esteemed as a perfume and a stimulant. "Narda" is the Sanscrit name of the plant. Its value was due to the great distance it had to be brought. In Mark xiv., 3-5, we read of "an alabaster cruse of ointment of spikenard very costly": and in John xii., 3, "a pound of ointment of spikenard, very precious." See reference to its odour (Song of Solomon, i., 12).

66. STACTE.—R.V. Opobalsamum. Generally held to be "storax," a fragrant gum resin obtained from the bark of the storax tree, *Styrax officinale*. Common on the lower hills of Palestine. One ingredient in the sacred incense (Exodus xxx., 34).

67. SYCAMINE.—The common mulberry, *Morus nigra*, is the tree intended, and is met with everywhere in Palestine, growing to a height of twenty feet. Mentioned in Luke xvii., 6, when our Lord was teaching the power of faith.

68. **SYCOMORE.**—The Biblical sycomore is the Egyptian fig, *Ficus sycamorus*, and is quite distinct from our sycamore, which is a maple. It was introduced into Egypt and Palestine at a very early date, where it supplied the common timber for furniture, mummy cases, etc. David appointed a special overseer of these trees (I. Chronicles, xxvii., 28; *see* also I. Kings, x., 27). In Psalm lxxviii., 47, there is a reference to the destruction of the trees in Egypt by frost (marginal note, R.V., "great hailstones"). Amos describes himself as a "cutter" of sycomore figs (Amos vii., 14). The top of the fig is cut off in order to allow the small flies which infest the fruit to escape, and thus render it sweet and fit for food. It is used for food at the present day in Egypt by the very poor. Zaccheus is said to have climbed into a sycomore tree to see Jesus pass by (Luke xix., 4).

69. **TARES.**—R.V. margin, "Darnel." The bearded darnel, *Lolium temulentum*, a kind of rye grass not uncommon in the cornfields of Palestine, and practically indistinguishable from wheat till the ear has appeared. The seeds were used medicinally by the Greeks and Romans, but death has sometimes resulted from their use, and from the earliest times the ill effects of darnel seeds have been testified to by numerous observers. In general these ill effects

have arisen from the intermixture of darnel seeds with other cereal grains. For the parable of the tares, see Matthew xiii., 24-30.

70. TEREBINTH, Tiel.—The Terebinth, *Pistacia terebinthus*, is the tree intended where the Hebrew word "elah" has been translated "oak." The R.V. margin gives "terebinth." It yields a considerable quantity of valuable turpentine, and abounds in rocky places and hill sides in Palestine. Abraham pitched his tent on his return from Egypt under a terebinth, where he received his heavenly visitors (Genesis xiii., 18; xiv., 13; xviii., 1). Jacob hid his strange gods under a terebinth (Genesis xxxv., 4) Absalom was caught by the head as his mule went under a terebinth (II. Samuel, xviii, 9). For other allusions, see Judges vi., 11, 19; Isaiah i., 30.

71. THYINE WOOD.—A.V. margin, sweet wood. A small tree of the Cypress family, *Callitris quadrivalvis*, found on the Atlas Mountains of North Africa, and known as Citronwood by the Romans. It was much prized for its beauty, and used for the manufacture of ornamental furniture. The resin obtained from it is known as Sandarac, and is used in the preparation of parchment. One of the priceless commodities of the Babylon of Revelation (Rev. xviii., 12).

72. **VINE.**—The vine, *Vitis vinifera*, has been cultivated from prehistoric times, and the vines of Palestine have long been famous. Probably more often alluded to than any other fruit tree in the Bible. From the vale of Eshcol the spies procured the cluster of grapes the size of which rendered it necessary to carry it between two, upon a staff (Numbers xiii., 23). The vineyard was not to be pruned the seventh year (Leviticus xxv., 3-7). Degenerate vines are alluded to by Isaiah when he describes the vineyard of the Lord: "And he looked that it should bring forth grapes, and it brought forth wild grapes" (Isaiah v,, 2). The vine, vineyard, and wine are frequently taken symbolically in Scripture (Jer. ii., 21; Psalms lxxx., 8-13, etc.). As an example of the fulfilment of prophecy (Isaiah xvi., 8-10; Jeremiah xlviii., 32-33). Our Lord taught by a parable of the vine (John xv., 1-8), and of the vineyard (Matthew xxi., 33-46).

(*See* Concordance for many other references).

73. **WHEAT.**—*Triticum vulgare*, and other varieties, have been cultivated in Palestine from time immemorial. The variety with many ears (Genesis xli., 22), usually called "mummy wheat," is depicted on the monuments, and is still cultivated. The notion that the so-called "mummy" wheat, supposed to have been taken from the hands of

mummies, has ever germinated, is quite erroneous. Wheat harvest, April to June, marks a division of the year. The wheat harvest escaped the plague of hail in Egypt (Exodus ix., 32). Corn was anciently kept in dry wells sunk in the solid rock, and Ahimaaz and Jonathan hid in one of these wells (II. Samuel, xvii., 19. For mention ot Hezekiah's storehouse, see II. Chronicles, xxxii., 28. All countries sent to Joseph to buy corn during the famine (Genesis xli., 57). Gideon threshed wheat in the winepress to hide it from the Midianites (Judges vi., 11). Corn is still "trodden out," as in Deuteronomy xxv., 4, we read, "thou shalt not muzzle the ox when he treadeth out the corn"; also pressed out by a wooden wheel, or threshed with a flail (Isaiah xxviii., 27-28), and then winnowed with a fan (Isaiah xxx., 24; Matthew iii., 12). Wheat and corn are used for many spiritual illustrations, as the parable of the "sower," and the parable of the "wheat and tares" (Matthew xiii., 18-30; Mark iv., 26-29), St. Paul used the germination of wheat as an illustration of the Resurection (I. Corinthians, xv., 36-38). Jesus and his disciples plucked the ears of corn on the Sabbath day (Matthew xii., 1),

(*See* Concordance for many other references).

74. **WILLOW.**—Several species of willow, *Salix*, are found, including the osier and weeping willow, but all of them scarce and local. The willow by the watercourses is,

according to an eminent authority, almost certainly the Oleander, *Nerium oleander*, the most universal of all shrubs in Palestine, and which fringes every wady and watercourse in the land. It is also everywhere used for making booths (Leviticus xxiii., 40), for which its thick tenacious leaves are as suitable, as those of our willow, if they could be had, are unsuitable. Job alludes to the hippopotamus and the willows of the brook (Job xl., 22). Israel laments her captivity, and says: "By the rivers of Babylon there we sat down, yea, we wept, when we remembered Zion. Upon the willows in the midst thereof we hanged up our harps" (Psalm cxxxvii., 1-2).

75. WORMWOOD.—Species of *Artemisia*, well-known for their bitter taste. Wormwood is always used metaphorically of bitter calamity or sorrow (*see* Deuteronomy xxix., 18; Jeremiah ix., 15; Lamentations iii., 15-19). The "hemlock" of Amos vi., 12, in the R.V. is wormwood.

COLLECTIONS OF SPECIMENS

ILLUSTRATING THE

Composition of Various Articles of Food and Drink.

WE have prepared, for use of Lecturers, Schoolmasters and others, the following Sets of Specimens, showing the Chemical Composition of various articles of Food and Drink. We have received many flattering testimonials as to their usefulness, and the Educational Section of the Yorkshire Fine Art and Industrial Exhihition, 1879, awarded a Medal to our collections.

Collection Illustrating the Chemical Composition of Food and Drink.

This Set shows the Chemical Composition of the principal articles of Food and Drink, as Bread, Beef, Potatoes, Peas, Milk, Eggs, Cheese, Beer, and Wine. In all, this collection contains 44 Bottles, the whole being enclosed in a strong Wooden Case.

PRICE - - £2 2 0

Smaller Collection, containing Beef, Beer, Bread, Milk, £1 1s.

Collection Illustrating the Chemical Composition of Alcoholic Drink.

This Set well shows the various amounts of water, alcohol, flesh-forming matter, heat-giving matter, &c., in different kinds of alcoholic drinks, and is specially adapted for illustrating temperance lectures. It contains examples of Ale, Porter, Port Wine, Claret, Champagne, Brandy, Gin and Rum. In strong Wooden Case.

PRICE - - £1 11 6

SPECIAL SETS PUT UP TO ILLUSTRATE ANY SUBJECT CONNECTED WITH FOOD AND DRINK.

Particulars and Prices on application.

76.—ROSE OF JERICHO, or RESURRECTION FLOWER.—*Anastatica Hierochuntina*.—This curious plant, looking like a withered twig, grows in the hot sandy plains of the Dead Sea. The plant receives its name—*Anastatica*, meaning Resurrection—from the strange way in which, when the flowers and leaves have dried up, the root becomes detached from the sandy soil and blows about till it again lodges in a moist place or is wetted with the rain, when the curled up globe expands and suffers the seeds to escape, which becoming embedded in the sand germinate anew. This curious effect may be watched by dipping the closed flowers (as supplied in the Herbarium) for a moment in water ; they will at once begin to expand, and in a few minutes will be fully open, only to close tightly again as before when dry. There is a cherished legend that the plant first opened at our Saviour's birth, closed at the crucifixion, and opened again at Easter. It is also said to have sprung up wherever the Holy Family rested in their flight into Egypt. It is supposed to be the plant alluded to in Ecclesiasticus : "I was as a Rose plant in Jericho" (Eccles. xxiv., 14).

